

Insights in the Early Eocene mammal faunas from Indo-Pakistan based on the Perissodactyla from the Ghazij Formation of Pakistan

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Despite ample study, the origin of modern mammals is still unknown. Many hypotheses focus on Asia, with sometimes a prominent role for the poorly known Indian subcontinent. The only Early Eocene mammal faunas known from Indo-Pakistan are those from the Vastan mine (India) and from the Ghazij Formation (Pakistan). Both are under active study, and here we present the first results on the Ghazij perissodactyls.

The most abundant small forms are two closely similar species of Isectolophidae, known from 121 dental specimens from a single locality. The most abundant larger forms are a group of puzzling bunodont perissodactyls, presenting similarities to the supposed anthracobunid *Nakusia* from the middle Ghazij Formation, to *Indobune* from Vastan and to the middle Eocene *Hallensia* from Europe. Brontotheriidae are represented by three new species that are morphologically similar to primitive forms known from the North American Bridgerian. A new species of both Lophialetidae and Eomoropidae are rare faunal elements.

The Ghazij perissodactyls thus represent a broad phylogenetic diversity and are markedly distinct from those at Vastan. They are moreover of a so far unique biogeographical and biochronological importance, suggesting faunal exchange between Indo-Pakistan and most or all Laurasian continents.